<u>IN THE CLAIMS</u>

Please amend the claims as follows:

1-34. (Canceled)

35. (Currently Amended) A session management apparatus that can connect to a first apparatus and a second apparatus over a network, <u>the first apparatus and the second apparatus</u> <u>exchanging Session Initiation Protocol (SIP) messages via the session management apparatus</u> <u>to establish a connection,</u> the session management apparatus comprising:

a part <u>configured to perform</u> ~~for performing~~ mutual authentication with the first apparatus to establish a first encrypted communication channel between the session management apparatus and the first apparatus, and <u>to store</u> ~~storing~~ a name of the first apparatus and identification information of the first encrypted communication channel in a storage device, wherein the name of the first apparatus <u>is obtained from a REGISTER</u> <u>message sent by the first apparatus, and the name of the first apparatus</u> and the identification information are associated with each other;

a part <u>configured to establish</u> ~~for establishing~~ a second encrypted communication channel between the session management apparatus and the second apparatus based on mutual authentication with the second apparatus;

a part <u>configured to receive an INVITE</u> ~~for receiving a~~ message including a name of the first apparatus via the first encrypted communication channel;

a part <u>configured to determine</u> ~~for determining~~ whether the name included in the <u>INVITE</u> message is correct by comparing the name included in the <u>INVITE</u> message with the name<u>, obtained from the REGISTER message,</u> that is stored in the storage device and that is associated with the identification information of the first encrypted communication channel; and

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a part <u>configured to send the INVITE</u> ~~for sending the~~ message to the second apparatus via the second encrypted communication channel.

36. (Currently Amended) The session management apparatus as claimed in claim 35, wherein, if the session management apparatus determines that the name of the first apparatus included in the <u>INVITE</u> message is not correct, the session management apparatus sends an error message to the first apparatus.

37. (Currently Amended) A session management apparatus that can connect to a first apparatus and a second apparatus over a network, <u>the first apparatus and the second apparatus exchanging Session Initiation Protocol (SIP) messages via the session management apparatus to establish a connection,</u> the session management apparatus comprising:

a part <u>configured to perform</u> ~~for performing~~ mutual authentication with the first apparatus to establish a first encrypted communication channel between the session management apparatus and the first apparatus;

a part <u>configured to establish</u> ~~for establishing~~ a second encrypted communication channel between the session management apparatus and the second apparatus based on mutual authentication with the second apparatus;

a part <u>configured to receive</u> ~~for receiving~~, from the first apparatus via the first encrypted communication channel, <u>an INVITE</u> [[a]] message including a first header indicating reliability of a route between the first apparatus and the session management apparatus; and

a part <u>configured to add</u> ~~for adding~~ a second header indicating reliability of a route between the session management apparatus and the second apparatus to the <u>INVITE</u>

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message, and to send ~~sending~~ the INVITE message to the second apparatus via the second

encrypted communication channel,

wherein, when the session management apparatus receives, from another session

management apparatus, an INVITE message to which headers indicating reliability of routes

are added, the session management apparatus adds an additional header indicating reliability

of a route between the session management apparatus and a next apparatus to the INVITE

message, and sends the INVITE message to the next apparatus.

38. (Original) The session management apparatus as claimed in claim 37, wherein

the first header includes an address of the first apparatus, and in response to receiving the first

header, the session management apparatus determines validity of the first header by

comparing an address included in the first header and an address of the first apparatus.

39. (Canceled)

40. (Currently Amended) A method for transferring a message among a first

apparatus, a session management apparatus and a second apparatus each connected to a

network, the first apparatus and the second apparatus exchanging Session Initiation Protocol

(SIP) messages via the session management apparatus to establish a connection, wherein:

the session management apparatus and the first apparatus perform mutual

authentication to establish a first encrypted communication channel between the session

management apparatus and the first apparatus, and the session management apparatus stores a

name of the first apparatus and identification information of the first encrypted

communication channel in a storage device, wherein the name of the first apparatus is

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obtained from a REGISTER message sent by the first apparatus, and the name of the first apparatus and the identification information are associated with each other;

the session management apparatus and the second apparatus performs mutual communication to establish a second encrypted communication channel between the session management apparatus and the second apparatus;

the first apparatus sends [[a]] an INVITE message including a name of the first apparatus via the first encrypted communication channel to the session management apparatus;

the session management apparatus determines whether the name included in the INVITE message is correct by comparing the name included in the INVITE message with the name, obtained from the REGISTER message, that is stored in the storage device and that is associated with the identification information of the first encrypted communication channel; and

the session management apparatus sends the INVITE message to the second apparatus via the second encrypted communication channel.

41. (Currently Amended) A method for transferring a message among a first apparatus, a session management apparatus and a second apparatus each connected to a network, the first apparatus and the second apparatus exchanging Session Initiation Protocol (SIP) messages via the session management apparatus to establish a connection, wherein:

the session management apparatus and the first apparatus perform mutual authentication to establish a first encrypted communication channel between the session management apparatus and the first apparatus;

the session management apparatus and the second apparatus perform mutual communication to establish a second encrypted communication channel between the session management apparatus and the second apparatus;

the first apparatus sends, to the session management apparatus via the first encrypted communication channel, [[a]] an INVITE message including a first header indicating reliability of a route between the first apparatus and the session management apparatus; and

the session management apparatus adds a second header indicating reliability of a route between the session management apparatus and the second apparatus to the INVITE message, and sends the INVITE message to the second apparatus via the second encrypted communication channel,

wherein, when the session management apparatus receives, from another session management apparatus, an INVITE message to which headers indicating reliability of routes are added, the session management apparatus adds an additional header indicating reliability of a route between the session management apparatus and a next apparatus to the INVITE message, and sends the INVITE message to the next apparatus.

42. (Currently Amended) A non-transitory computer-readable medium including a computer program, which when executed by a computer causes the computer to function as a session management apparatus that can connect to a first apparatus and a second apparatus over a network, the first apparatus and the second apparatus exchanging Session Initiation Protocol (SIP) messages via the session management apparatus to establish a connection, the computer program comprising:

program code for performing mutual authentication with the first apparatus to establish a first encrypted communication channel between the session management apparatus and the first apparatus, and storing a name of the first apparatus and identification

information of the first encrypted communication channel in a storage device, wherein the

name of the first apparatus is obtained from a REGISTER message sent by the first apparatus,

and the name of the first apparatus and the identification information are associated with each

other;

program code for establishing a second encrypted communication channel between

the session management apparatus and the second apparatus based on mutual authentication

with the second apparatus;

program code for receiving [[a]] an invite message including a name of the first

apparatus via the first encrypted communication channel;

program code for determining whether the name included in the INVITE message is

correct by comparing the name included in the INVITE message with the name, obtained

from the REGISTER message, that is stored in the storage device and that is associated with

the identification information of the first encrypted communication channel; and

program code for sending the INVITE message to the second apparatus via the second

encrypted communication channel.

43. (Currently Amended) A non-transitory computer-readable medium including a

computer program, which when executed by a computer causes the computer to function as a

session management apparatus that can connect to a first apparatus and a second apparatus

over a network, the first apparatus and the second apparatus exchanging Session Initiation

Protocol (SIP) messages via the session management apparatus to establish a connection, the

computer program comprising:

program code for performing mutual authentication with the first apparatus to

establish a first encrypted communication channel between the session management

apparatus and the first apparatus;

program code for establishing a second encrypted communication channel between the session management apparatus and the second apparatus based on mutual authentication with the second apparatus;

program code for receiving, from the first apparatus via the first encrypted communication channel, [[a]] an INVITE message including a first header indicating reliability of a route between the first apparatus and the session management apparatus; [[and]]

program code for adding a second header indicating reliability of a route between the session management apparatus and the second apparatus to the INVITE message, and sending the INVITE message to the second apparatus via the second encrypted communication channel; and

program code for, when the session management apparatus receives, from another session management apparatus, an INVITE message to which headers indicating reliability of routes are added, adding an additional header indicating reliability of a route between the session management apparatus and a next apparatus to the INVITE message, and sending the INVITE message to the next apparatus.

44. (Previously Presented) A method for establishing an encrypted communication channel between a first apparatus and a second apparatus, and performing communication between the second apparatus and a third apparatus using the encrypted communication channel, comprising:

a first step of exchanging key information for encrypted communication and performing mutual authentication between a session management apparatus and the second apparatus so as to establish a second encrypted communication channel between the session management apparatus and the second apparatus;

a second step in which the first apparatus is accessed by the third apparatus;

a third step of exchanging key information for encrypted communication and performing mutual authentication between the session management apparatus and the first apparatus so as to establish a first encrypted communication channel between the session management apparatus and the first apparatus;

a fourth step in which the first apparatus sends, to the session management apparatus via the first encrypted communication channel, a connection request message destined for the second apparatus including key information used for encrypted communication between the first apparatus and the second apparatus, and the session management apparatus sends the connection request message to the second apparatus via the second encrypted communication channel;

a fifth step in which the second apparatus sends, to the session management apparatus via the second encrypted communication channel, a response message including key information used for encrypted communication between the first apparatus and the second apparatus in response to receiving the connection request message, and the session management apparatus sends the response message to the first apparatus via the first encrypted communication channel;

a sixth step in which the. first apparatus receives data from the second apparatus via the encrypted communication channel established between the first apparatus and the second apparatus, and sends the data to the third apparatus,

wherein the first apparatus is provided with a table including at least one connection destination permitted for the third apparatus, and the first apparatus sends information of the at least one connection destination to the third apparatus in response to receiving access from the third apparatus, and receives a connection destination from the third apparatus so as to send the connection request message destined for the second apparatus to the session

management apparatus in the fourth step based on the connection destination received from the third apparatus.

45. (Previously Presented) A method for establishing an encrypted communication channel between a first apparatus and a second apparatus, and performing communication between the second apparatus and a third apparatus using the encrypted communication channel, comprising:

a first step of exchanging key information for encrypted communication and performing mutual authentication between a session management apparatus and the first apparatus so as to establish a first encrypted communication channel between the session management apparatus and the first apparatus;

a second step of exchanging key information for encrypted communication and performing mutual authentication between the session management apparatus and the second apparatus so as to establish a second encrypted communication channel between the session management apparatus and the second apparatus;

a third step in which the first apparatus is accessed by the third apparatus;

a fourth step in which the first apparatus sends, to the session management apparatus via the first encrypted communication channel, a connection request message destined for the second apparatus including key information used for encrypted communication between the first apparatus and the second apparatus, and the session management apparatus sends the connection request message to the second apparatus via the second encrypted communication channel;

a fifth step in which the second apparatus sends, to the session management apparatus via the second encrypted communication channel, a response message including key information used for encrypted communication between the first apparatus and the second

apparatus in response to receiving the connection request message, and the session

management apparatus sends the response message the first apparatus via the first encrypted

communication channel;

a sixth step in which the first apparatus receives data from the second apparatus via

the encrypted communication channel established between the first apparatus and the second

apparatus, and sends the data to the third apparatus,

wherein the first apparatus is provided with a table including at least one connection

destination permitted for the third apparatus, and the first apparatus sends information of the

at least one connection destination to the third apparatus in response to receiving access from

the third apparatus, and receives a connection destination from the third apparatus so as to

send the connection request message destined for the second apparatus to the session

management apparatus in the fourth step based on the connection destination received from

the third apparatus.

46. (Previously Presented) The method as claimed in claim 44, wherein the session

management apparatus has information for determining whether connection is permitted

between apparatuses,

when the session management apparatus receives a connection request message

destined for an apparatus of a connection request destination from an apparatus of a

connection request source, the session management apparatus determines whether connection

between the apparatus of the connection request destination and the apparatus of the

connection request source is permitted by referring to the information, and

if the connection is permitted, the session management apparatus sends the connection

request message to the apparatus of the connection request destination, and if the connection

is not permitted, the session management apparatus rejects the connection without sending

the connection request message to the apparatus of the connection request destination.

47. (Previously Presented) The method as claimed in claim 45, wherein the session

management apparatus has information for determining whether connection is permitted

between apparatuses,

when the session management apparatus receives a connection request message

destined for an apparatus of a connection request destination from an apparatus of a

connection request source, the session management apparatus determines whether connection

between the apparatus of the connection request destination and the apparatus of the

connection request source is permitted by referring to the information, and

if the connection is permitted, the session management apparatus sends the connection

request message to the apparatus of the connection request destination, and if the connection

is not permitted, the session management apparatus rejects the connection without sending

the connection request message to the apparatus of the connection request destination.

48. (Previously Presented) An apparatus that establishes an encrypted

communication channel to a second apparatus by using a session management apparatus, the

apparatus comprising:

a first part configured to exchange key information for encrypted communication with

the session management apparatus, perform mutual authentication with the session

management apparatus so as to establish an encrypted communication channel between the

apparatus and the session management apparatus;

a second part configured to send, to the session management apparatus via the

encrypted communication channel, a connection request message including key information

for encrypted communication between the apparatus and the second apparatus, and receive, from the second apparatus via the session management apparatus, a response message including key information for encrypted communication between the apparatus and the second apparatus so as to establish an encrypted communication channel between the apparatus and the second apparatus;

a part configured to perform, after being accessed by a third apparatus, processing by the first part for establishing the encrypted communication channel between the apparatus and the session management apparatus, and processing by the second part for establishing the encrypted communication channel between the apparatus and the second apparatus, and receive data from the second apparatus via the encrypted communication channel established between the apparatus and the second apparatus, and send the data to the third apparatus;

a table including at least one connection destination permitted for the third apparatus; and

a part configured to send information of the at least one connection destination to the third apparatus in response to receiving access from the third apparatus, and receive a connection destination from the third apparatus,

wherein the second part sends the connection request message destined for the second apparatus to the session management apparatus based on the connection destination received from the third apparatus.

49. (Previously Presented) An apparatus that establishes an encrypted communication channel to a second apparatus by using a session management apparatus, the apparatus comprising:

a first part configured to exchange key information for encrypted communication with the session management apparatus, perform mutual authentication with the session

management apparatus so as to establish an encrypted communication channel between the apparatus and the session management apparatus;

a second part configured to send, to the session management apparatus via the encrypted communication channel, a connection request message including key information for encrypted communication between the apparatus and the second apparatus, and receive, from the second apparatus via the session management apparatus, a response message including key information for encrypted communication between the apparatus and the second apparatus so as to establish an encrypted communication channel between the apparatus and the second apparatus;

a part configured to perform, after being accessed by a third apparatus, processing by the second part for establishing the encrypted communication channel between the apparatus and the second apparatus, and receive data from the second apparatus via the encrypted communication channel established between the apparatus and the second apparatus, and send the data to the third apparatus;

a table including at least one connection destination permitted for the third apparatus; and

a part configured to send information of the at least one connection destination to the third apparatus in response to receiving access from the third apparatus, and receive a connection destination from the third apparatus,

wherein the second part sends the connection request message destined for the second apparatus to the session management apparatus based on the connection destination received from the third apparatus.

50. (Previously Presented) A non-transitory computer-readable medium including computer program instructions, which when executed by an apparatus, cause the apparatus to

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perform a method of establishing an encrypted communication channel to a second apparatus by using a session management apparatus, the method comprising:

exchanging key information for encrypted communication with the session management apparatus;

performing mutual authentication with the session management apparatus so as to establish an encrypted communication channel between the apparatus and the session management apparatus;

sending, to the session management apparatus via the encrypted communication channel, a connection request message including key information for encrypted communication between the apparatus and the second apparatus;

receiving, from the second apparatus via the session management apparatus, a response message including key information for encrypted communication between the apparatus and the second apparatus so as to establish an encrypted communication channel between the apparatus and the second apparatus;

establishing, after being accessed by a third apparatus, the encrypted communication channel between the apparatus and the session management apparatus;

establishing the encrypted communication channel between the apparatus and the second apparatus;

receiving data from the second apparatus via the encrypted communication channel established between the apparatus and the second apparatus;

sending the data to the third apparatus;

storing at least one connection destination permitted for the third apparatus;

sending information of the at least one connection destination to the third apparatus in response to receiving access from the third apparatus;

receiving a connection destination from the third apparatus; and

sending the connection request message destined for the second apparatus to the

session management apparatus based on the connection destination received from the third

apparatus.

51. (Previously Presented) A non-transitory computer-readable medium including

computer program instructions, which when executed by an apparatus, cause the apparatus to

perform a method of establishing an encrypted communication channel to a second apparatus

by using a session management apparatus, the method comprising:

exchanging key information for encrypted communication with the session

management apparatus;

performing mutual authentication with the session management apparatus so as to

establish an encrypted communication channel between the apparatus and the session

management apparatus;

sending, to the session management apparatus via the encrypted communication

channel, a connection request message including key information for encrypted

communication between the apparatus and the second apparatus;

receiving, from the second apparatus via the session management apparatus, a

response message including key information for encrypted communication between the

apparatus and the second apparatus to establish an encrypted communication channel

between the apparatus and the second apparatus;

establishing the encrypted communication channel between the apparatus and the

second apparatus;

receiving data from the second apparatus via the encrypted communication channel

established between the apparatus and the second apparatus;

sending the data to the third apparatus;

storing at least one connection destination permitted for the third apparatus;

sending information of the at least one connection destination to the third apparatus in

response to receiving access from the third apparatus;

receiving a connection destination from the third apparatus; and

sending the connection request message destined for the second apparatus to the

session management apparatus based on the connection destination received from the third

apparatus.